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Short Communication

New records of Thyrididae (Lepidoptera) from Great Nicobar Island, India

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Abstract

We report a Sundaland inhabitant, *Rhodoneura pudicula* Guenée, 1858 (Lepidoptera: Thyrididae) from Great Nicobar Island, Andaman & Nicobar Islands, the first-time record from India. Description, diagnosis, images of habitus and male genitalia are provided. Additionally, we report the extension of the distributional range of two thyridids: *Mellea taeniata* (Warren, 1908) and *Aglaopus decussata* (Moore, 1883), up to the Great Nicobar Island.

Keywords: Great Nicobar, Lepidoptera, New Record, India, Thyrididae

Introduction

The Thyrididae are small to medium-sized moths with about 760 species known worldwide (Munroe, 1982; Heppner, 1991; Robinson *et al*., 1994, Holloway *et al*., 2001; Choi, 2005) and we estimate more than 50 species from India. Adults are generally with hyaline patches and striae on the wings (Hampson, 1892). The wings are broadly and typically reticulated with a similar pattern on both forewing and hindwing. The systematic relationship of Thyrididae has been frequently mentioned with Pyralidae because of the general appearance of their larvae (Common, 1970; Whalley, 1976; Choi, 2005), but the former is distinguished by the lack of abdominal tympanal organ and the proboscis is without basal scaling (Minet, 1983; Scoble, 1992; Choi, 2005). In addition, the apomorphies of the Thyrididae are: the presence of lateral lobes on the first abdominal tergite, hindwing with vein CuP vestigial, and during the resting position, mid legs are not in contact with the substrate (Holloway *et al*., 2001; Choi, 2005).

This manuscript reports *Rhodoneura pudicula* Guenée, 1858 (Lepidoptera: Thyrididae), a Sundaland inhabitant, from Great Nicobar Island (Andaman & Nicobar Islands), the first time record of the species from India. Description, images of habitus and male genitalia are provided. Additionally, we report two thyridids: *Mellea taeniata* (Warren, 1908) and *Aglaopus decussata* (Moore, 1883), for the first time from the Great Nicobar Island, both of which are, so far, reported from North East India only.

Material and Methods

The collection of adult moths was done in 2018 during Great Nicobar Expedition by using a vertical sheet light trap. The collected specimens were processed as per standard techniques in Lepidopterology (Dickson, 1976), and deposited in the National Zoological Collections of Lepidoptera Section Zoological Survey of India, Kolkata.

Systematic Account

Genus ***Rhodoneura*** Guenée, 1858

1858. *Rhodoneura* Guenée, in Boisduval and Guenée *Hist. Nat. Insectes* (Spec. gén. Lépid), 10 (Atlas): Pl. 1: Fig. 8. Type Species: *Rhodoneura pudicula* Guenée.

1863. *Osca* Walker, *J. Proc. Linn. Soc.* (Zool.) **7**: 73 (preocc. *Osca* Walker, 1850 (Diptera)). Type Species: *Osca guttulosa* Walker.

Diagnosis: Most of the *Rhodoneura* species are with yellowish wing colour having dark median fascia (except in *R. sugitanii*, with whitish wing). *Rhodoneura* species resembles with *Striglina* Guenée but are distinct in male genitalia by the long uncus; well-developed loop forming gnathos arms with a medial projection; valva slender, membranous; juxta with a pair of large sclerotized processes; aedeagus slender; vesica without cornutus. In

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the female genitalia, ostium bursae are simple, ductus bursae are slender, and corpus bursae are membranous, semi-ovate with a slender or stellate signum (Choi, 2005).

Rhodoneura pudicula Guenée 1858 (Figure 1-4)

1858. *Rhodoneura pudicula* Guenée, in Boisduval & Guenée *Hist. Nat. Insectes* (Spec. gén. Lépid), 10 (Atlas): Pl. 1: Fig. 8. Type Locality: Java, Celebs.

1863. *Osca guttulosa* Walker, *J. Proc. Linn. Soc.* (Zool.) **7**: 73.

Material examined: India, Andaman and Nicobar Islands, Great Nicobar Island; Watch tower, 06.xi.2018 (01 ♂), 4 km South of Vijay Nagar, 12.xi.2018 (03 ♀, 1♂), Galathea, 03.xi.2018 (01 ♀), Laxminagar, 11.xi.2018 (01 ♂), Chingambasti, 09.xi.2018 (01 ♂), Bird watching point, 14.xi.2018 (01 ♀), *leg.* K. C. Gopi & party.

Description: Wingspan 40-42 mm. Forewing with ground colour silvery white; irregular broad black bands, crossed with veins; costal area brownish yellow, reticulated; veins paler in general, pinkish towards outer area; marginal line and cilia pinkish. Hindwing with black bands much reduced. Underside of a wings greenish-brown with pink veins. Male genitalia with uncus broad at base, tapering till middle, distal half digitate; gnathos arms united medially to form a semi-round loop and medial tip projected; valva tongue-shaped, with a flap-like structure at medio-basal area; juxta deeply grooved, bilobed; saccus deep v-shaped; aedeagus curved centrally; vesica without cornutus.

Distribution: India: Great Nicobar Island (present study); Thailand, W. Malaysia, Sumatra, Java, Bali, Borneo, Sulawesi, New Guinea (Robinson *et al*., 1994).

Remark: First record from India.

Genus ***Mellea*** Gaede, 1922

1922. *Mellea* Gaede, *Dt. ent. Z.* **1922**: 34. Type Species *Rhodoneura angustifasciata* Gaede, 1922.

Mellea taeniata (Warren, 1908) (Figure 5)

1908. *Banisia taeniata* Warren, *Nov. Zool.*, **15**: 327.

Material examined: India: Andaman and Nicobar Islands, Great Nicobar Island; Galathea, 29.xi.2018 (01 ♀), Steel bridge, East-West Road, 13.xi.2018 (01 ♀), Gobindnagar, 18.xi.2018 (01 ♂), *leg.* K.C. Gopi & party.

Description: Wingspan 42-44 mm. Head with antennae filiform, labial pulpi upturned, thorax hairy. General ground colour of head, thorax, forewing and hindwing scarlet with zigzag, black-bordered parallel strips runs from costa to inner margin of both wings, denser in central area.

Distribution: India: Great Nicobar Island (present study); Assam, Sikkim (Sutton *et al*., 2015), Vietnam, Thailand (Sutton *et al*., 2015).

Remark: First record from the Great Nicobar Island.

Genus ***Striglina*** Guenée, 1877

1877. *Striglina* Guenée, *Ann. Soc. Ent. Fr*. (5)7: 283. Type species: *Striglina lineola* Guenée, 1877.

Striglina scitaria (Walker, 1862) (Figure 6)

1862. *Drepanodes scitaria* Walker, *List Spec. Lepid. Insects Colln Br. Mus*., **26**: 1488-1489.

Material examined: India: Andaman and Nicobar Islands, Great Nicobar Island, Laxminagar, 11.xi.2018 (02 ♂), Watch tower, 06.xi.2018 (01 ♂, 01♀), Bird watching point, 14.xi.2018 (01♀, 01♂), Steel bridge, East West Road, 13.xi.2018 (01 ♀), *leg*. K. C. Gopi & party.

Description: Wing span 20-24 mm. Head, collar, thorax and abdomen scarlet; antennae filiform; labial palpi upturned. Adult with ground color pale scarlet with both wings uniformly striated with brown. A purplish red diagonal line crossing both wings which runs from before apex of forewing to the inner margin of hindwing.

Distribution: India: Nicobar Island, Assam, Andaman Islands, (Sutton *et al*., 2015); China, Taiwan, Korea, Japan, Maldives, Sri Lanka, Goa, Nepal, Myanmar, Vietnam, Thailand, Laos, West Malaysia, Brunei, Sabah, Sarawak, Indonesia (Java, Bali, Sulawesi), Philippines, Australia, Fiji (Sutton *et al*., 2015).

Genus ***Aglaopus*** Turner, 1911

1911. *Aglaopus* Turner, *Ann. Queensland Mus*., **10**: 98; Type species: *Aglaopus niphocosma* Turner, 1911.

Aglaopus decussata (Moore, 1883) (Figure 7)

1883. *Sonagara decussata* Moore, *Proc. Zool. Soc. Lond*., 1883: **2**.

Material examined: India, Andaman and Nicobar Islands, Great Nicobar Island; Bird watching point, 14.xi.2018 (01 ♀), *leg*. K.C. Gopi & party.

Description: Wing span 32-34 mm. Head, thorax, abdomen yellowish brown; collar brown; antennae filiform; labial pulpi upturned. Ground color of both wings yellowish brown, with four black spots at basal region; two median,

Figures 1-7. *Rhodneura pudicula* Guenée 1858, **1-2.** Adult, **3.** Male genitalia, **4.** Aedeagus, **5.** *Mellea taeniata* (Warren, 1908), **6.** *Striglina scitaria* (Walker, 1862), **7.** *Aglaopus decussata* (Moore, 1883).

black circular and rectangular spots present, series of black 'X' shaped spots in sub - marginal area, irregular arrangement of black spots in middle and outer area of forewings and hindwings.

Distribution: India: Great Nicobar Island (present study), Sikkim, Assam, Meghalaya, Nagaland (Sutton *et al*., 2015). *Elsewhere*: Thailand, W. Malaysia, Sabah, Sarawak, Kalimantan Barat, Siberut, Sumatra, Java, Sulawesi, Moluccas, Seram, Buru, Ambon, Sulawesi, West Papua, PNG, Philippines, Taiwan (Sutton *et al*., 2015).

Remark: First-time record from the Great Nicobar Island.

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